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YYY
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                      777
                                                   $$$$$$$$$$
$$$$$$$$$$
$$$$$$$$$$
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| DDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD | VV | |
|--|--|--|
| | \$\$\$\$\$\$\$\$\$ \$ | |
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TITLE DEVICEDAT - VAX/VMS SYSTEM PERMANENT DEVICE DATABASE

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FACILITY:

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VAX/VMS I/O SUBSYSTEM

ABSTRACT:

SYSTEM PERMANENT DEVICE DATABASE

AUTHOR:

R.HEINEN 3-AUG-76

MODIFIED BY:

V04-001 BLS0351 Benn Schreiber 6-SEP-1984 Must dpt_store fields for cloneable opa ucb.

V03-023 WHM0003 Bill Matthews 19-Jul-1984 Make OPA\$IDB global for use by OPDRVWS1.

V03-022 LMP0275

Initialize the ACL info in the ORB to be a null descriptor list rather than an empty queue. This avoids the overhead of locking and unlocking the ACL mutex, only to find out that the ACL was empty.

V03-021 CDS0003 Christian D. Saether 1-May-1984 Reflect change of wcb size in net\$wcb.

V03-020 EMD0092 Ellen M. Dusseault 30-Apr-1984 Add DEV\$M_NNM characteristic to DEVCHAR2 for the

console and mailbox devices so that they will have the prefix 'node\$'.

V03-019 LMP0221 L. Mark Pilant, 30-Mar-1984 12:35 Move UCB protection information to the Object's Rights Block.

- V03-018 PRD0072 Paul R. DeStefano 27-Feb-1984
 Add SB\$L_CSB (link to newest Cluster System Block)
 to permanent local system block.
- V03-017 WHM0002 Bill Matthews 27-Feb-1984 Add support for 4 units in the OPA IDB for VENUS.
- V03-016 WHM0001 Bill Matthews 6-Feb-1984 Add support for new IDB fields for combo style devices.
- V03-015 LMP0185 L. Mark Pilant, 1-feb-1984 9:08 Add support for device ACLs.
- V03-014 MMD0224 Meg Dumont, 23-Jan-1984 10:15 Add longword to store the Asynch DDCMP driver DPT
- V03-013 JLV0319 Jake VanNoy 16-DEC-1983 Add TTY\$GL_JOBCTLMB, SYS\$GL_UIS, UIS\$GL_USB, and SYS\$GL_FALEBACK.
- V03-012 TCM0001 Trudy C. Matthews 12-Sep-1983 Initialize the boot device's UCB\$W_REFC field to 1. This prevents \$ASSIGN from trying to take out a lock on the system disk before locking is enabled.
- V03-011 CWH3001 CW Hobbs 5-Jul-1983
 Increase size of operator mailbox (MBA2:) to 2560
 byte maximum messages. This will support the security
 message of 2048 bytes + various headers rounded up to
 nearest page.
- V03-010 RLRDPORT Robert L. Rappaport 25-May-1983 Increase size of Boot Device UCB.
- V03-009 ROW0187 Ralph O. Weber 30-APR-1983 Increase default buffer size of null device from 132 to 512 bytes.
- V03-008 ROW0172 Ralph O. Weber 10-APR-1983 Change null device UCB device type to DT\$_NULL.
- V03-007 DWT0066 David W. Thiel 20-Jan-1983 Update definition of the local system block.
- V03-006 MIR0022 Michael I. Rosenblum 19-Jan-1983 Change Console terminal port vector table to use the new vector creation macros.
- V03-005 KTA3022 Kerbey T. Altmann 29-Dec-1982 Add permanent local system block.

```
- VAX/VMS SYSTEM PERMANENT DEVICE DATABA 16-SEP-1984 00:00:42 VAX/VMS Macro V04-00 6-SEP-1984 16:33:49 [SYS.SRC]DEVICEDAT.MAR;2
                                                                                                                                              (1)
                                                                                                                                      Page
                 115
116
117
                                   V03-004 CDS0002 Christian D. Saether Reflect move of WCB cells in NET$WCB::.
                                                                                                         27-Dec-1982
                                   V03-003 CDS0001
                                                                      Christian D. Saether
                                                                                                         13-Dec-1982
                                               Fix problems with WCB growing a longword.
                  ROW0123 Ralph O. Weber 12-SEP-1982 Fix UCB macro so that it needs no ASSUMEs. Have it use $UCBDEF constants an .BLKBs to define fill space rather than
                                   V03-002 ROW0123
                                               numeric constants.
                                   V03-001 BLS0183
                                                                      Benn Schreiber
                                                                                                          25-Aug-1982
                                               Reorganize OPAO: data structures for loadable console
                                               terminal support.
                          SYMBOL DEFINITIONS
                                                                                    DEFINE CRB
DEFINE DEVICE CLASSES
DEFINE DDB
DEFINE DEVICE CHARACTERISTICS
STRUCTURE TYPE CODE DEFINITIONS
                                   $CRBDEF
                                    $DCDEF
                                    $DDBDEF
                                    SDEVDEF
                                    SDYNDEF
                                                                                    DEFINE IDB
DEFINE IPL LEVELS
DEFINE IRP OFFSETS
OBJECT'S RIGHTS BLOCK OFFSETS
                                    $IDBDEF
                                    $IPLDEF
                                    $IRPDEF
                                    SORBDEF
                                    $SBDEF
                                                                                    DEFINE TERMINAL CHARACTERISTICS
DEFINE UCB
TTY UCB extension (must FOLLOW $UCBDEF)
THE TERMINAL DRIVER MACRO DEFINITIONS
DEFINE CRB VECTOR
                                    $TTDEF
                                    SUCBDEF
                                    STTYDEFS
                                                                                  DEFINE CRB
                                    STTYMACS
                                    SVECDEF
                                   SWCBDEF
                          LOCAL MACROS
                                   .MACRO ORB
                                                          LABEL, ?EN, ?ACL
                       ORBASE =.
                       LABEL::
                                    . LONG
                                    .WORD
                                                                                  ; ACL MUTEX INITIALIZATION
                                    . WORD
                                               EN-LABEL
                                              DYNSC ORB
ORBSM PROT 16
ORBSK LENGTH - <. - LABEL>
                                    BYTE
                                    .BLKB
                       EN:
                                    .ENDM
                                    .MACRO STO_ORB OFFSET, SIZE, VALUE
                                    X=.
                                    .=ORBASE+ORB$'OFFSET
                                   .'SIZE 'VALUE
                                    . ENDM
```

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0000
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                  .MACRO UCB
                                                                LABEL, EXPAND=0, ORB_ADDR, ?IOL, ?EN, ?ACL
                        UCBASE = .
                        LABEL::
                                      .LONG
.WORD
.BYTE
.BYTE
.BLKB
.LONG
.BLKB
                                                  0.0
EN-LABEL
DYN$C_UCB
                                                 ORB ADDR
UCB$L IOQFL - <. - LABEL>
IOL IOL
UCB$K LENGTH - <. - LABEL>
EXPAND
                                                   UCB$L_ORB - <. - LABEL>
LONG
BLKB
                         IOL:
                         EN:
                                       . ENDM
                                       .MACRO STO_UCB OFFSET, SIZE, VALUE
                                      X=.
                                      .=UCBASE+UCB$'OFFSET
                                      .=X
                                      . ENDM
                                                  DDB$L_LINK
DDB$L_UCB
DDB$W_SIZE
DDB$B_TYPE
DDB$L_DDT
DDB$L_ACPD
                                      ASSUME
                                                                             8
10
12
16
                                      ASSUME
                                      ASSUME
                                     ASSUME
ASSUME
ASSUME
                                      .MACRO
                                                 DDB NAME, NEXT, FUCB, DDT, ACP, ATYPE, DEVNAM, DRVNAM, ?EN
                         NAME ::
                                      .LONG
                                                   NEXT
                                                   FUCB
EN- NAME
                                      .LONG
                                      .WORD
                                                  DYNSC_DDB,0
                                                  DDT A/'ACP/+<'ATYPE@24>
/'DEVNAM/
                                      .LONG
                                      .LONG
                                      - 'NAME+DDB$T DRVNAME
.ASCIC / 'DRVNAM/
- 'NAME+DDB$L SB
.LONG SCS$GX LOCALSB
- 'NAME+DDB$C_EENGTH
                         EN:
                                      . ENDM
                                      .PSECT $$$100,QUAD,WRT
```

SYS\$GL_FALLBACK::

00000000

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(2)

0000008C

; future expansion

.BLKB

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- VAX/VMS SYSTEM PERMANENT DEVICE DATABA 16-SEP-1984 00:00:42 VAX/VMS Macro VO4-00 Page 7 SYSTEM BOOT DEVICE DATABASE 6-SEP-1984 16:33:49 [SYS.SRC]DEVICEDAT.MAR;2 (4)

008C 316 .SBTTL SYSTEM BOOT DEVICE DATABASE 008C 317;
008C 318; BOOT DEVICE DDB 008C 319;
008C 319;
008C 320 DDB SYS$GL_BOOTDDB,OPA$GL_DDB,SYS$GL_BOOTUCB,O,<f11>,1
00D0 321;
00D0 322; UCB FOR SYSTEM BOOT DEVICE 00D0 323;
00D0 324;
00D0 325;
00D0 326; NOTE - THE UCB FOR THE BOOT DEVICE IS CREATED WITH A REFERENCE COUNT OF 1
00D0 327; TO AVOID HAVING THE FIRST $ASSIGN TRY TO TAKE OUT A LOCK ON IT BEFORE 00D0 329;
```

*1

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DEVICEDAT
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- VAX/VMS SYSTEM PERMANENT DEVICE DATABA 16-SEP-1984 00:00:42 VAX/VMS Macro V04-00 SYSTEM CONSOLE DEVICE DATABASE 6-SEP-1984 16:33:49 [SYS.SRC]DEVICEDAT.MAR;2
                                                                                                                                                                                                                                                                                                                                                                                          (5)
                                                                                               .SBTTL SYSTEM CONSOLE DEVICE DATABASE
                                                                      CONSOLE TERMINAL DDB
                                                                                              DDB
                                                                                                                             OPA$GL_DDB,MB$GL_DDB,OPA$UCBO,,,O,<OPA>,<OPERATOR>
                                                                       CONSOLE DPT
                                                                      THE UCB SIZE INCLUDES 3 BYTES FOR ROUNDUP, AND 64 BYTES OF EXTRA SPACE TO ALLOW INCREASING UCB SIZE WITHOUT NEEDING TO BUILD A NEW
     0000000
                                                                                              .PSECT $$$105_PROLOGUE,RD,WRT,BYTE
                                                                                                                                                                                                                                                         ; Ensure OP$DPT label points to DPT
                                                               OPSDPT::
                     0000
     0000029
                                                                                                 PSECT $$$100,QUAD,WRT
                                                                                                                                                                                                                                                         : (DPTAB macro puts DPTAB in $$$105
                                                                                               DPTAB
                                                                                                                             END=OP_DPTEND,-
ADAPTER=UBA,-
                                                                                                                                                                                                                            : FAKE ADAPTER
                                                                                                                             UCBSIZE = < < UCB$C_TT_LENGTH+3+64>/4>*4>,-
                                                                                                                              NAME=OPERATOR,-
                                                                                        VECTOR=OPA$VECTOR

DPT_STORE INIT
DPT_STORE UCB,UCB$L_TT_DECHAR, aL, TTY$GL_DEFCHAR; DEFAULT CHARACTERISTICS
DPT_STORE UCB,UCB$L_TT_DECHA1, aL, TTY$GL_DEFCHAR;
DPT_STORE UCB,UCB$L_DEVODEPBND, aL, TTY$GL_DEFCHAR
DPT_STORE UCB,UCB$L_DEVODEPBND, aL, TTY$GL_DEFCHAR
DPT_STORE UCB,UCB$L_TT_DEVDP1, aL, TTY$GL_DEFCHAR2
DPT_STORE UCB,UCB$L_TT_DEVDP1, aL, TTY$GL_DEFCHAR2
DPT_STORE UCB,UCB$L_DEVCHAR, L, <-; CHARACTERISTICS

DEV$M_REC!-
DEV$M_AVL!-
DEV$M_IDV!-
DEV$M_OV!-
DEV$M_OV!-
DEV$M_CCL>

DEV$M_CCL>

DPT_STORE UCB,UCB$L_DEVCHAR2, L, -; DEVICE CHARACTERISTICS

OPT_STORE UCB,UCB$L_TTDEVCHAR2, L, -; DEVICE CHARACTERISTICS

OPT_STORE UCB,UCB$L_TTDEVCHAR2, L, -; DEVICE CHARACTERISTICS

OPT_STORE UCB,UCB$L_TTDEVCHAR2, L, -; DEVICE CHARACTERISTICS

DEVICE IPL

DEVSICE IPL

DEVSICE IPL

DEVSICE IPL

DEVICE IPL

DE
                                                                                                                              VECTOR=OPASVECTOR
                                                                                              DPT_STORE REINIT
                                                                                                                                                                                                                                                                                        : Is this needed?
                                                                                                 .PSECT $$$105_PROLOGUE,RD,WRT,BYTE
                                                                                                                                                                                                                                                                                      : Put OP_DPTEND label in cor
                                                             OP_DPTEND:
```

V

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- VAX/VMS SYSTEM PERMANENT DEVICE DATABA 16-SEP-1984 00:00:42 VAX/VMS Macro V04-00 SYSTEM CONSOLE DEVICE DATABASE 6-SEP-1984 16:33:49 [SYS.SRC]DEVICEDAT.MAR;2
                                                                                                                                                                                                                                                                                                                                                                                                          (5)
                                                                   00A0
00A0
0A00
                                                                                           CONSOLE PORT DISPATCH VECTOR. THIS VECTOR IS USED BY THE TERMINAL CLASS DRIVER TO ACCESS PORT FUNCTIONS. EACH ELEMENT IN THIS VECTOR POINTS TO A LOCATION IN SYSLOAVEC. THIS MUST BE IN SAME PSECT AS OPSDPT TO GUARANTEE THAT A POSITIVE VECTOR OFFSET IS STORED IN DPT
                                                                                                         OPASVECTOR::
                                                                                                                                     TOR::

SVECINI OPA, CONSNULL

SVEC STARTIO, CONSSTARTIO ; START

SVEC DISCONNECT, CONSDISCONNECT

SVEC SET_LINE, CONSSET_LINE ; SET_LI

SVEC DS_SET, CONSDS_SET ; DATA S

SVEC XON, CONSXON ; XON RO

SVEC XOFF, CONSXOFF ; XOFF ROUTINE

SVEC STOP, CONSSTOP ; STOP ROUTINE

SVEC STOP2, CONSSTOP2 ; STOP2 ROUTINE

SVEC STOP2, CONSSTOP2 ; STOP2 ROUTINE

SVEC ABORT, CONSABORT ; ABORT ROUTINE

SVEC RESUME, CONSRESUME ; RESUME

SVEC SET_MODEM, CONSSET_MODEM ; SET_MODEM
                                                                                                                                                                                                                                                                             ; START ROUTINE
                                                                                                                                                                                                                                                                                   : SET LINE ROUTINE
: DATA SET ROUTINE
: XON ROUTINE
                                                                                                                                                                                                                                                                                   : RESUME ROUTINE
                                                                                                                                                                                                                                                                                     : SET MODEM ROUTINE
                                                                                                                                       SVECEND
                                                                    0000
                                                                    OODC
                                                    0000029C
029C
029C
                                                                                                                                        .PSECT $$$100,QUAD,WRT
                                                                                                                CONSOLE UCB
                                                                                                                                       ORB
                                                                                                                                                                    OPA$ORBO
                                                                                                                                                                 STO_ORB L_OWNER,LONG,<^XO10001>
OPA$UCBO,<CUCB$C_TT_LENGTH - UCB$C_LENGTH + 3 + 64> / 4>,OPA$ORBO
STO_UCB B_FIPL,BYTE,8
STO_UCB B_DIPL,BYTE,20
STO_UCB L_CRB,LONG,OPA$CRB
STO_UCB L_DDB,LONG,OPA$GL_DDB
STO_UCB L_DEVCHAR,LONG,<<DEV$M_REC!-
DEV$M_AVL!-
DEV$M_CC!!-
                                                                                                                                      UCB
                                                                                                                                                                DEV$M_AVL!-
DEV$M_TRM!-
DEV$M_TDV!-
DEV$M_ODV>>

STO_UCB L_DEVCHAR2,LONG,<<DEV$M_NNM>>
STO_UCB B_DEVCLASS,BYTE,DC$_TERM
STO_UCB B_DEVTYPE,BYTE,DT$_CA36
STO_UCB W_DEVBUFSIZ,WORD,132
STO_UCB W_STS,WORD,UCB$M_ONLINE
STO_UCB L_DEVDEPEND,LONG,<<TI$M_LOWER!TI$M_TISYNC!TI$M_WRAP>>
STO_UCB L_DEVDEPEND+3,BYTE,24
STO_UCB L_TT_DECHAR,LONG,<<TI$M_LOWER!TI$M_TISYNC!TI$M_WRAP>>
STO_UCB L_TT_DECHAR,LONG,<<TI$M_LOWER!TI$M_TISYNC!TI$M_WRAP>>
STO_UCB L_TT_DECHAR,LONG,<<TI$M_LOWER!TI$M_TISYNC!TI$M_WRAP>>
STO_UCB L_TT_DECHAR+3,BYTE,24
STO_UCB W_TT_SPEED,WORD,TT$C_BAUD_300
STO_UCB W_TT_DESPEE,WORD,TT$C_BAUD_300
                                                                                            460
461
462
463
464
                                                                                                                CONSOLE CRB
                                                                                                           OPA$CRB::
                                                                                                                                        .LONG
00000000 00000000
```

| DEVICEDAT - SY | AX/VMS SYSTEM PERMANENT DEV TEM CONSOLE DEVICE DATABASE | ICE DATABA 16-SEP-1984 00 6-SEP-1984 16 | 0:00:42 VAX/VMS Macro V04-00 Page 10 0:33:49 [SYS.SRC]DEVICEDAT.MAR;2 (5) |
|---|--|--|---|
| 0000000 0000000 0000000 | 0472 466 .BYTE 0473 467 .BYTE 0474 468 .LONG 0478 469 ASSUME | CD-OPASCRB DYNSC_CRB 0 1 CRBSL_AUXSTRUC EQ 16 | : SIZE : TYPE IS CRB : UNUSED : REF COUNT=1 AND NEVER BUSY : Auxiliary structure ptr. |
| 0000000 | 047C 471 047C 472 ASSUME 047C 473 .LONG | CRB\$L_TIMELINK EQ 20 | ; CRB thread for periodic wakeups. |
| 0000000 | 0480 475 ASSUME 0480 476 .LONG | CRB\$L_DUETIME EQ 24 | ; Time when to periodically awaken |
| 0000000 | 0484 478 ASSUME 0484 479 .LONG | CRB\$L_TOUTROUT EQ 28 | ; Routine to call at periodic awakening |
| 0000000 | 0488 481 ASSUME 0488 482 LONG 048C 483 CONSINTDISI:: 048C 484 ASSUME | 0 - | : NO NEXT CRB |
| 00000000°GF 1 | 048C 485 048C 486 ASSUME 048C 487 PUSHR 048E 488 JSB | VEC\$Q_DISPATCH_EQ_O #^M <ro,r1,r2,r3,r4,r5> G^CUNSINTINP</ro,r1,r2,r3,r4,r5> | : SAVE REGISTERS : INPUT INTERRUPT SERVICE |
| 000004B | 0494 490 ASSUME 0494 491 .LONG | VEC\$L IDB EQ 8 OPA\$IDB | ; POINTER TO IDB |
| 0000000 | 0498 493 ASSUME 0498 494 .LONG | VEC\$L INITIAL EQ 12 CONSINITIAL | ; INITIALIZE CONTROLLER ENTRY POINT |
| 0000000 | 049C 496 ASSUME 049C 497 ASSUME 049C 498 ASSUME 049C 499 .LONG 04A0 500 04A0 501 ASSUME 04A0 502 .LONG | VEC\$W_MAPREG EQ 16 VEC\$B_NUMREG EQ 18 VEC\$B_DATAPATH EQ 19 | ; MAP AND DATA PATH ALLOCATION CONTROL |
| 0000000 | 04A0 501 ASSUME 04A0 502 .LONG 04A4 503 | VECSL_ADP EQ 20 | ; ADDRESS OF ADP |
| 0000000 | 04A4 504 ASSUME 04A4 505 .LONG 04A8 506 | VECSL UNITINIT EQ 24 CONSINITLINE | ; INITIALIZE UNIT |
| 0000000 | 04A8 507 ASSUME 04A8 508 .LONG | VECSL_START EQ 28 | ; UNUSED LONGWORD |
| 0000000 | 04AC 510 ASSUME 04AC 511 .LONG 04BO 512 ASSUME 04BO 513 04BO 514 CON\$INTDISO:: | VEC\$L_UNITDISC EQ 32 VEC\$K_LENGTH EQ 36 | : UNUSED LONGWORD |
| | DARD 313 ASSUME | CONSINTDISO-OPASCRB | ÉQ CRBSL_INTD2 |
| 00000C00 3F B 00000C00 GF 1 000004B | 04B0 516 04B0 517 ASSUME 04B0 518 PUSHR 04B2 519 JSB 1 04B8 520 .LONG 04BC 521 | VEC\$Q DISPATCH EQ 0 #^M <ro,r1,r2,r3,r4,r5> G^CONSINTOUT OPASIDB</ro,r1,r2,r3,r4,r5> | SAVE REGISTERS OUTPUT INTERRUPT SERVICE POINTER TO IDB |

| - VA SYST | X/VMS S EM CONS | YSTEM OLE DE | PERMANE VICE DA | NT DEVI | CE DATABA 16-SEP | -198 -198 | 4 00 | 00 |):42 VAX/VMS Macro VO4-00 Page 11 3:49 [SYS.SRC]DEVICEDAT.MAR;2 (5) |
|---|--|--|--------------------|--|---|--------------|-------|----|--|
| | 04BC 04BC | 522 523 c | D: | ASSUME | VEC\$L_IDB | EQ | 8 | | |
| | 04BC 04BC 04BC 04BC 04BC | 525 | CONSOL | | | | | | |
| 00000000 | 04BC 04BC 04BC 04BC | 528 0 529 530 | PA\$IDB: | ASSUME LONG | IDB\$L_CSR | EQ | 0 | : | CSR ADDRESS |
| 00000000 0030 00 | 04C0 04C0 04C0 04C4 04C6 | 23-45-67-89-01-23-45-67-89-0 22222222233555555555555555555555555555 | | ASSUME .LONG .WORD .BYTE .BYTE | IDB\$L_OWNER O ID-OPA\$IDB DYN\$C_IDB O | EQ | 4 | | OWNER UCB ADDRESS SIZE OF IDB TYPE OF STRUCTURE UNUSED |
| 0005 00 00 | 04C8 04C8 04C8 04CA 04CB | 538 539 540 541 | | ASSUME .WORD .BYTE .BYTE | IDB\$W_UNITS | EQ | 12 | | NUMBER OF UNITS TT ENABLE CSR OFFSET TO MAIN CSR FOR COMBO STYLE DEV |
| 00 00 0000 | 04CC 04CC 04CD 04CE 04DO | 5445 5445 5445 5445 5446 5446 5446 5446 | | ASSUME .BYTE .BYTE .WORD | IDB\$B_COMBO_VEC | TOR_ | OFFSI | ET | EQ 16 VECTOR OFFSET TO MAIN VECTOR FOR COMBO STY UNUSED UNUSED |
| 00000000 | 0400 | 548 | | ASSUME .LONG | IDB\$L_ADP | EQ | 20 | ; | ADAPTER ADDRESS |
| 000002F4° 00000000 00000000 00000000 00000000 0000 | 04D0 04D4 04D4 04D8 04DC 04E0 04E4 04E8 | 549 5551 5552 5555 5556 5557 5557 5557 | D: | ASSUME .LONG .LONG .LONG .LONG .LONG .LONG | IDB\$L_UCBLST OPA\$UCBO 0 0 0 | EQ | 24 | | UNIT 0 UCB ADDRESS UNIT 1 UCB ADDRESS (FLOPPY) UNIT 1 INPUT UCB ADDRESS (FLOPPY) UNIT 3 USED BY VENUS ONLY UNIT 4 (RESERVED) UNIT 5 (RESERVED) |

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- VAX/VMS SYSTEM PERMANENT DEVICE DATABA 16-SEP-1984 00:00:42
SYSTEM PERMANENT MAILBOX DATABASE 6-SEP-1984 16:33:49
                                                                                                                                                                                                                       VAX/VMS Macro V04-00
[SYS.SRC]DEVICEDAT.MAR;2
                                                                                                                                                                                                                                                                                                                                    12 (6)
                                                     .SBTTL SYSTEM PERMANENT MAILBOX DATABASE
                                                                        MAILBOX DDB
                                                                                            DDB
                                                                                                                     MB$GL_DDB, NL$GL_DDB, MB$GL_UCB1, MB$DDT, , O, <MBA>, <MBDRIVER>
                                                                        CLONE MAILBOX UCB
                                                                        NOTE THAT THIS UCB IS NOT IN THE DDB'S UCB LIST
                                                                                                                  MB$ORBO

STO_ORB L_OWNER,LONG,<^XO10001>
MB$UCBO,O, MB$ORBO

STO_UCB W_MB_SEED,WORD,O

STO_UCB B_FIPL,BYTE,IPL$_MAILBOX

STO_UCB B_DIPL,BYTE,IPL$_MAILBOX

STO_UCB W_MSGMAX,WORD,20

STO_UCB W_BUFQUO,WORD,-1

STO_UCB L_CRB,LONG,SY$_CRB

STO_UCB L_DB,LONG,MB$GL_DB

STO_UCB L_LINK,LONG,MB$GL_UCB1

STO_UCB L_DEVCHAR,LONG,<<DEV$M_REC!-

DEV$M_AVL!-

DEV$M_AVL!-

DEV$M_MBX!-

DEV$M_MBX!-

DEV$M_MBX!-

DEV$M_ODV!-

DEV$M_SHR>>

STO_UCB B_DEVCLASS,BYTE,DC$_MAILBOX

STO_UCB B_DEVTYPE,BYTE,DT$_MBX

STO_UCB B_DEVTYPE,BYTE,DT$_MBX

STO_UCB W_REFC,WORD,1

STO_UCB W_STS,WORD,UCB$M_ONLINE

STO_UCB W_STS,WORD,UCB$M_PRMMBX

STO_UCB W_DEVSTS,WORD,UCB$M_PRMMBX

STO_UCB L_DDT,LONG,MB$DDT
                                                                                                                         MB$ORBO
                                                                                            UCB
                               MB$MBO END:
SYS$C_MBXUCBSIZ ==
00000090
                                                                                                                                              <MB$MB0_END - MB$UCB0>
                                                      601
                                                     602
603
604
605
606
607
608
610
                                                                        SYSTEM JOB CONTROLLER MAILBOX
                                                                  SYS$GL_JOBCTLMB::
SYS$C_JOBCTLMB==^A/MBA1/
3141424D
                                                                                                                    -A/MBA1/
MB$GL_UCB1,0, MB$GL_ORB1
STO_UCB L_FQFL,LONG,MB$GL_UCB1
STO_UCB L_FQFL+4,LONG,MB$GL_UCB1
STO_UCB B_FIPL,BYTE,IPL$_MAILBOX
STO_UCB B_DIPL,BYTE,IPL$_MAILBOX
STO_UCB W_MSGMAX,WORD,60
STO_UCB W_BUFQUO,WORD,-1
STO_UCB L_CRB,LONG,SY$_CRB
STO_UCB L_DDB,LONG,MB$GL_DDB
STO_UCB L_DDB,LONG,MB$GL_DDB
STO_UCB L_DEVCHAR,LONG,<<DEV$M_REC!-
                                                                                           UCB
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- VAX/VMS SYSTEM PERMANENT DEVICE DATABA 16-SEP-1984 00:00:42 VAX/VMS Macro V04-00 SYSTEM PERMANENT MAILBOX DATABASE 6-SEP-1984 16:33:49 [SYS.SRC]DEVICEDAT.MAR;2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     13 (6)
                                                                                                                                                                                                                                                                                                                                                                                                                                            Page
                                                                                                                                                                 DEV$M_AVL!-
DEV$M_MBX!-
DEV$M_IDV!-
DEV$M_ODV!-
DEV$M_ODV!-
DEV$M_SHR>>
STO_UCB L_DEVCHAR2.LONG.<CDEV$M_NNM>>
STO_UCB B_DEVCLASS.BYTE.DC$_MAILBOX
STO_UCB W_DEVBUFSIZ.WORD.1024
STO_UCB W_REFC.WORD.1
STO_UCB W_UNIT.WORD.1
STO_UCB W_UNIT.WORD.1
STO_UCB W_STS.WORD.UCB$M_ONLINE
STO_UCB W_DEV$TS.WORD.CUCB$M_PRMMBX+^X08000>
STO_UCB L_DDT.LONG.MB$DDT
MB$GL_ORB1
                                                                                                                                                                    MB$GL_ORB1
STO_ORB L_OWNER, ONG, <^X010004>
STO_ORB W_PROT, WORD, <^X0FF0F>
                                                                                                                                 ORB
                                                                                                     SYSTEM OPERATOR MAILBOX
                                                                                             SYS$GL_OPRMBX::
SYS$C_OPRMBX==^A/MBA2/
3241424D
                                                                                                                                                                  A/MBA2/
MB$GL_UCB2,0, MB$GL_ORB2
STO_UCB L_FQFL,LONG,MB$GL_UCB2
STO_UCB L_FQFL+4,LONG,MB$GL_UCB2
STO_UCB B_FIPL,BYTE,IPL$_MAILBOX
STO_UCB B_DIPL,BYTE,IPL$_MAILBOX
STO_UCB W_MSGMAX,WORD,20
STO_UCB W_BUFQUO,WORD,-1
STO_UCB L_CRB,LONG,SY$_CRB
STO_UCB L_CRB,LONG,SY$_CRB
STO_UCB L_DDB,LONG,MB$GL_DDB
STO_UCB L_DEVCHAR,LONG,<<DEVSM_REC!-
DEV$M_AVL!-
DEV$M_MBX!-
                                                                                                                                UCB
                                                                                                                                                                 DEV$M_AVL!-
DEV$M_MBX!-
DEV$M_IDV!-
DEV$M_ODV!-
DEV$M_SHR>>
STO_UCB L_DEVCHAR2,LONG,<<DEV$M_NNM>>
STO_UCB B_DEVCLASS,BYTE,DC$_MAILBOX
STO_UCB W_DEVBUFSIZ,WORD,2560
STO_UCB W_REFC,WORD,1
STO_UCB W_UNIT,WORD,2
STO_UCB W_STS,WORD,UCB$M_ONLINE
STO_UCB W_DEVSTS,WORD,UCB$M_PRMMBX
STO_UCB L_DDT,LONG,MB$DDT
MB$GL_ORB2
STO_ORB L_OWNER,LONG,<^X010004>
STO_ORB W_PROT,WORD,<^X0FF0F>
                                                                                                                                 ORB
```

```
07E8 665
07E8 666
07E8 667
07E8 667
07E8 668
07E8 669
07E8 668
07E8 669
07E8 669
07E8 669
07E8 668
07E8 669
07E8 668
07E8 669
07E8 668
07E8 669
07E8 669
07E8 667
07E8 668
07E8 667
07E8 668
07E8 669
07E8 670
07E8 679
07
```

15 (8)

Page

```
.SBTTL NETWORK DEVICE DATABASE
                                    NETWORK DEVICE DATA BLOCK
                                    NETWORK WINDOW CONTROL BLOCK - SHARED BY ALL UCB'S
                                  NETSWCB::
          00000000
00000000
0030
12
                                           .LONG
                                                                                 WLFL
                                                                                 WLBL
                                                    10$-NET$WCB
                                           . WORD
                                                    DYNSC_WCB
                                                                                CALL IT A WCB
                                           .BYTE
                                                    WCB$B_ACCESS
                                           ASSUME
                                                                      EQ 11
                00
                                           .BYTE
                                                                               ; ACCESS BITS
                                           ASSUME
                                                    WCB$L_PID
                                                                      EQ 12
          00000000
                                           . LONG
                                                                               ; PID
                                           ASSUME
                                                    WCB$L_ORGUCB
                                                                      EQ 16
          00000000
                                           . LONG
                                                                               ; ORGUCB
                                           ASSUME
ASSUME
                                                                      EQ
                                                    WCB$W_ACON
                                                    WCB$W_NMAP
          00000000
                                           . LONG
                                                                               ; ACON AND NMAP
                                           ASSUME
                                                    WCB$L_FCB
                                                                      EQ 24
          00000000
                                           .LONG
                                                                               : FCB
                                           ASSUME
                                                   WCB$L_RVT
                                                                      EQ 28
          00000000
                                           .LONG
                                                                               ; RVT
                                           ASSUME
                                                    WCB$L_LINK
                                                                      EQ 32
          00000000
                                           . LONG
                                                                               : LINK
                                                    WCB$L_READS
                                           ASSUME
                                                                      EQ 36
          00000000
                                           .LONG
                                                                               ; READS EXECUTED
                                           ASSUME
                                                    WCB$L_WRITES
                                                                      EQ 40
                                           . LONG
          00000000
                                                                               : WRITES EXECUTED
                                           ASSUME
                                                    WCB$L_STVBN
                                                                      EQ
          00000000
                                                                               : ACCESS LOCK ID
                                           . LONG
                                                                      EQ
                                           ASSUME
                                                    WCB$K_LENGTH
                                 10$:
                                    COMMON CRB FOR MAILBOX TYPE DEVICES
                             744
745
746
747
748
749
750
                                  SYS_CRB:
                                                    0.0
10$-SYS_CRB
00000000 00000000
                                           .LONG
                                                                                 CRB LIST HEAD
                                           . WORD
               0048
                                                                                 SIZE
                     094E
094F
0950
0954
0954
                                                    DYNSC_CRB
                                           .BYTE
                                                                                 TYPE
                                                                                 SPARE BYTE
                                           .BYTE
          00000000
                                                                                 REF COUNT
                                            LONG
                                           ASSUME
                                                    CRB$L_AUXSTRUC
                                                                      EQ 16
          00000000
                                           . LONG
                                                                               ; Auxiliary structure ptr.
```

| DEVICEDAT Symbol table | - VAX/VMS | SYSTEM | PERMANEN | T DEVICE DATABA | 16-SEP-1984 6-SEP-1984 | 00:00:42 y 16:33:49 | | cro V04-00 EVICEDAT.MAR;2 | Page | 17 (8) |
|---|--|-------------|--|--|---------------------------|---|--|--|------|--------|
| \$\$\$ \$\$OP AT\$_UBA | = 00000020 = 00000001 = 00000001 00000480 | R | 03 | DPT\$REINITAB | | 00000 00000 = 00000 | 009F R 0000 R | 03 | | |
| CD CONSABORT CONSDISCONNECT CONSINITIAL CONSINITIAL CONSINITLINE CONSINITUSO CONSINITUSO CONSINITUP CONSINITUT CONSINITUT CONSRESUME CONSSET_LINE CONSSET_LINE | ******* ******* 0000048C 000004BO ******* ******* | X X X | 023 033 000 000 000 000 000 000 000 000 | DTS_LA36 DTS_MBX DTS_NULL DYNSC_CRB DYNSC_DDB DYNSC_DPT DYNSC_IDB DYNSC_ORB DYNSC_SCS DYNSC_SCS DYNSC_UCB DYNSC_WCB ID IDBSB_COMBO_VEC IDBSL_ADP | TOR_OFFSET | = 00000 = 00000 = 00000 = 00000 = 00000 = 00000 = 00000 = 00000 = 00000 | 009F R 0000 R 0001 0003 0005 0006 001E 0009 0049 0060 0010 0012 R | 02 | | |
| CONSSET_LINE CONSSET_MODEM CONSSTARTIO CONSSTOP CONSSTOP2 CONSXOFF CONSXON CRBSL_AUXSTRUC | ******* ******* = 00000010 = 00000018 | X | 03 03 03 03 03 | IDB\$L_CSR IDB\$L_OWNER IDB\$L_UCBLST IDB\$W_UNITS IOC\$GL_ADPLIST IOC\$GL_DEVLIST | | = 00000 = 00000 = 00000 00000 | 0010 0014 0000 0004 0008 0000 0000 0078 0008 | 02 02 02 | | |
| CRB\$L_AUXSTRUC CRB\$L_DUETIME CRB\$L_INTD CRB\$L_INTD2 CRB\$L_LINK CRB\$L_TIMELINK CRB\$L_TOUTROUT DC\$_DISK DC\$_MAILBOX DC\$_TERM | = 00000018 = 00000024 = 00000020 = 00000014 = 00000010 = 00000001 = 000000042 = 00000044 = 00000044 | | | IDBSB_COMBO_VEOUR IDBSL_CSR IDBSL_CSR IDBSL_OWNER IDBSL_UCBLST IDBSW_UNITS IOCSGL_ADPLIST IOCSGL_DEVLIST IOCSGL_DEVLIST IOCSGL_DPTLIST IPLS_MAILBOX MBSDDT MBSGL_DDB MBSGL_ORB1 MBSGL_UCB1 MBSGL_UCB2 MBSMBO_END MBSORBO MBSUCBO | | **** | **** X | 02 02 02 02 02 02 02 02 02 02 02 02 | | |
| DDB\$B_TYPE DDB\$C_LENGTH DDB\$L_ACPD DDB\$L_DDT DDB\$L_LINK DDB\$L_SB DDB\$L_UCB DDB\$T_DRVNAME DDB\$W_SIZE | = 00000000 = 00000000 = 00000034 | | | MB\$UCBO NET\$WCB NL\$DDT NL\$GL_DDB NL\$GL_ORBO NL\$GL_UCBO NO\$GL_DPT OP\$DPT OPA\$CRB | | 00000 | 914 RG | | | |
| DDB\$L_ACPD DDB\$L_DDT DDB\$L_LINK DDB\$L_SB DDB\$L_UCB DDB\$T_DRVNAME DDB\$W_SIZE DEV\$M_AVL DEV\$M_CCL DEV\$M_CCL DEV\$M_DIR DEV\$M_ELG DEV\$M_FOD DEV\$M_IDV DEV\$M_MBX DEV\$M_NNM DEV\$M_ODV DEV\$M_REC | = 00000004 = 00000024 = 00000008 = 00040000 = 00000008 = 00400000 = 00400000 = 004000000 = 000000001 = 000000004 = 000000004 = 00000004 | | | OPASIDB OPASORBO OPASUCBO OPASVEC OPASVECEND | | 00000 00000 00000 00000 00000 00000 0000 | 7E8 RG 82C RG 884 RG 0010 RG 0000 RG 0468 RG 0258 RG 0258 RG 0264 RG 0000 R | 02 02 02 02 03 03 03 03 03 03 | | |
| DEVSM_REC DEVSM_RND DEVSM_SHR DEVSM_TRM DPT\$C_LENGTH DPT\$C_VERSION DPT\$INITAB | = 10000000 = 00010000 = 00000004 = 00000004 = 00000004 | R | 03 | OP DPTEND ORB\$B_FLAGS ORB\$K_LENGTH ORB\$L_OWNER ORB\$M_PROT_16 ORB\$W_PROT ORBASE PORT_ABORT | | = 00000 = 00000 = 00000 = 00000 = 00000 | 0058 0000 0001 0018 082C R | 02 | | |

| DEVICEDAT - Symbol table | VAX/VMS SYST | EM PERMANENT | DEVICE DATABA | 16-SEP-1984 00:00:42 6-SEP-1984 16:33:49 | VAX/VMS Macr [SYS.SRC]DEV | O VO4-00 ICEDAT.MAR;2 | Page | 18 (8) |
|---|--|---|--|--|--|--------------------------|------|--------|
| PORT_DISCONNECT PORT_DS_SET PORT_DS_SET PORT_LENGTH PORT_SET_LINE PORT_SET_MODEM PORT_SET_MODEM PORT_STOP PORT_STOP2 PORT_XOFF PORT_XON SB\$B_ENBMSK SB\$B_HWVERS SB\$B_SYSTEMID SB\$K_LENGTH SB\$L_CSB SB\$L_DDB SB\$L_DDB SB\$L_PBFL SB\$L_DDB SB\$L_PBFL SB\$L_SB\$L_PBFL SB\$L_SB\$L_SWINCARN SB\$S_ENBMSK SB\$T_HWTYPE SB\$T_SWVERS SB\$T_NODENAME SB\$T_SWVERS SB\$W_MAXDG SB\$W_TIMEOUT SCS\$GA_LOCALSB SCS\$GQ_CONFIG SYS\$C_JOBCTLMB SYS\$C_MBXUCBSIZ SYS\$C_MBXUCBSIZ SYS\$C_DROTUCB SYS\$GL_BOOTUCB SYS\$GL_FALLBACK SYS\$GL_BOOTUCB SYS\$GL_FALLBACK SYS\$GL_BOOTUCB SYS\$GL_FALLBACK SYS\$GL_OPRMBX SYS\$GL_OPRMBX SYS\$GL_OPRMBX SYS\$GL_OPRMBX SYS\$GL_FALLBACK SYS\$GL_OPRMBX S | 00000000000000000000000000000000000000 | 020000000000000000000000000000000000000 | UCB\$B_TT_DETYPE UCB\$C_LENGTH UCB\$C_TT_LENGTH UCB\$C_TT_LENGTH UCB\$L_CRB UCB\$L_DDB UCB\$L_DDT UCB\$L_DEVCHAR2 UCB\$L_DEVCHAR2 UCB\$L_DEVDEPEND UCB\$L_DEVDEPEND UCB\$L_TT_DECHA1 UCB\$L | = 000 = 0000 = 0000 = 0000 = 0000 = 0000 = 0000 = 0000 = 0000 = 0000 = 00000 = 0000 = 0000 = 0000 = 0000 = 0000 = 0000 = 0000 = 0000 = 00000 = 0000 = 0000 = 0000 = 0000 = 0000 = 0000 = 0000 = 0000 = 00000 = 0000 = 0000 = 0000 = 0000 = 0000 = 0000 = 0000 = 0000 = 00000 = 0000 = 0000 = 0000 = 0000 = 0000 = 0000 = 0000 = 0000 = 00000 = 0000 = 0000 = 0000 = 0000 = 0000 = 0000 = 0000 = 0000 = 00000 = 0000 = 0000 = 0000 = 0000 = 0000 = 0000 = 0000 = 0000 = 00000 = 0000 = 0000 = 0000 = 0000 = 0000 = 0000 = 0000 = 0000 = 00000 = 0000 = 0000 = 0000 = 0000 = 0000 = 0000 = 0000 = 0000 = 00000 = 0000 = 0000 = 0000 = 0000 = 0000 = 0000 = 0000 = 0000 = 00000 = 0000 = 0000 = 0000 = 0000 = 0000 = 0000 = 0000 = 0000 = 000 | 0000F0 000090 000034 000028 000028 000038 000030 000040 0000010 000010 000018 0000014 0000054 0000014 0000054 0000014 0000018 0000012 0000018 0000018 0000010 000018 0000010 000010 000010 0000010 | 2 | | |

DEVICEDAT Psect synopsis - VAX/VMS SYSTEM PERMANENT DEVICE DATABA 16-SEP-1984 00:00:42 VAX/VMS Macro VO4-00 6-SEP-1984 16:33:49 [SYS.SRC]DEVICEDAT.MAR;2

! Psect synopsis !

| PSECT name | Allocation | PSECT No. | Attributes | | | | |
|---|---|--|--|-------------------------------|---|------|---|
| . ABS . \$ABS\$ \$\$\$100 \$\$\$105_PROLOGUE | 00000000 (0.) 00000000 (0.) 0000098C (2444.) 000000DC (220.) | 00 (0.) 01 (1.) 02 (2.) 03 (3.) | NOPIC USR NOPIC USR NOPIC USR NOPIC USR | CON ABS CON REL CON REL | LCL NOSHR NOE) LCL NOSHR E) LCL NOSHR E) LCL NOSHR E) | E RD | NOWRT NOVEC BYTE WRT NOVEC BYTE WRT NOVEC QUAD WRT NOVEC BYTE |

Performance indicators

| Phase | Page faults | CPU Time | Elapsed Time |
|--|------------------|-------------|----------------------------|
| Initialization . | 36 | 00:00:00.08 | 00:00:01.39 |
| Command processing | 36 131 524 | 00:00:00.54 | 00:00:06.21 00:01:13.29 |
| Symbol table sort Pass 2 | 147 27 | 00:00:02.98 | 00:00:09.25 |
| Symbol table output Psect synopsis output | 27 | 00:00:00.18 | 00:00:00.91 |
| Cross-reference output Assembler run totals | 869 | 00:00:00.00 | 00:00:00.00 |

The working set limit was 1800 pages.
121898 bytes (239 pages) of virtual memory were used to buffer the intermediate code.
There were 110 pages of symbol table space allocated to hold 1937 non-local and 25 local symbols.
786 source lines were read in Pass 1, producing 24 object records in Pass 2.
60 pages of virtual memory were used to define 56 macros.

! Macro library statistics !

Macro library name

Macros defined

\$255\$DUA28:[SYS.OBJ]LIB.MLB;1
\$255\$DUA28:[SYSLIB]STARLET.MLB;2
TOTALS (all libraries)

23 7 30

2373 GETS were required to define 30 macros.

There were no errors, warnings or information messages.

MACRO/LIS=LIS\$:DEVICEDAT/OBJ=OBJ\$:DEVICEDAT MSRC\$:DEVICEDAT/UPDATE=(ENH\$:DEVICEDAT)+EXECML\$/LIB

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